

IN THE CLAIMS

Applicant provides the below claim listing for the Examiner's convenience. No amendments are made but several new claims are added. Upon entry of this response, Claims 1, 3-14, 42-54, and 100-114 are pending.

1. (Previously Presented) A method of accessing a wireless multiple-access communication system, comprising:
 - receiving at least one broadcast message including information regarding configuration of at least two contention-based random access channels for a frame;
 - determining a current operating state of a terminal;
 - selecting one contention-based random access channel from among at least two contention-based random access channels based on the current operating state; and
 - transmitting a message on the selected random access channel to access the system during the frame,wherein the at least two contention-based random access channels comprise a first random access channel used by registered terminals for system access and a second random access channel used by registered and unregistered terminals for system access.
2. (Canceled)
3. (Previously Presented) The method of claim 1, wherein transmissions on the first random access channel are compensated for propagation delay.
4. (Original) The method of claim 1, wherein the current operating state is indicative of whether or not the terminal has registered with the system.
5. (Original) The method of claim 1, wherein the current operating state is indicative of whether or not the terminal can compensate for propagation delay to an access point receiving the message.
6. (Original) The method of claim 1, wherein the current operating state is indicative of whether or not a particular received signal-to-noise ratio (SNR) is achieved for the terminal.

7. (Previously Presented) The method of claim 1, further comprising:
retransmitting the message until an acknowledgement is received for the message or a maximum number of access attempts has been exceeded.
8. (Original) The method of claim 1, further comprising:
if access is not gained via the selected random access channel, transmitting another message on another random access channel selected from among the at least two random access channels.
9. (Previously Presented) The method of claim 1, wherein the transmitting comprises:
selecting a slot from among a plurality of slots available for the selected random access channel; and
transmitting the message in the selected slot.
10. (Original) The method of claim 1, wherein the message includes an identifier for the terminal.
11. (Original) The method of claim 10, wherein the identifier is unique to the terminal.
12. (Original) The method of claim 10, wherein the identifier is a common identifier used by unregistered terminals.
13. (Original) The method of claim 1, wherein the multiple-access communication system supports terminals with single antenna and terminals with multiple antennas.
14. (Original) The method of claim 1, wherein the multiple-access communication system uses orthogonal frequency division multiplexing (OFDM).
15. – 41. (Cancelled)
42. (Previously Presented) The method of claim 1, wherein receiving the at least one broadcast message comprises receiving at least two broadcast messages each associated with a different one of the at least two random access channels.

43. (Previously Presented) The method of claim 1, further comprising determining a slot to transmit the message on the one contention-based random access channel based upon a slot assigned to the at least one contention-based random access channel in the at least one broadcast message and wherein transmitting comprises transmitting the message in the slot of the frame.
44. (Previously Presented) The method of claim 1, wherein transmitting the message comprises transmitting the message on a set of subbands of a plurality of subbands of the one contention-based random access channel.
45. (Previously Presented) The method of claim 1, wherein the message transmitted on the one contention-based random access channel comprises one OFDM symbol.
46. (Previously Presented) The method of claim 1, wherein the message transmitted on the one contention-based random access channel comprises four OFDM symbols.
47. (Previously Presented) The method of claim 1, wherein the message transmitted on the one contention-based random access channel comprises two OFDM symbols.
48. (Previously Presented) The method of claim 1, wherein determining the current operating state of a terminal comprises determining if the terminal is scheduled and the method further comprising utilizing a data channel, and not selecting one contention-based random access channel, for transmission.
49. (Previously Presented) The method of claim 1, wherein the second contention-based random access channel of the at least two contention-based random access channels corresponds to a contention-based random access channel used by a terminal after acquiring system frequency, wherein determining comprises determining whether the terminal has acquired the system frequency, and wherein selecting comprises selecting the second contention-based random access channel as the one contention-based random access channel when the terminal has acquire the system frequency and is not registered.

50. (Previously Presented) The method of claim 1, wherein transmitting the message comprises transmitting a different message format on each of the at least two contention-based random access channels.

51. (Previously Presented) The method of claim 1, further comprising receiving an assignment responsive to the message from a base station.

52. (Previously Presented) The method of claim 51, wherein receiving the assignment comprises receiving an acknowledgement in a message including the assignment.

53. (Previously Presented) The method of claim 51, further comprising determining scheduling information of the assignment for a channel distinct from the at least two contention-based random access channels.

54. (Previously Presented) The method of claim 1, wherein:
determining comprises determining whether the terminal is not registered with the system;
selecting comprises selecting the second contention-based random access channel to register with system, if the terminal is unregistered; and
transmitting comprises transmitting the message as a request to register with the system.

55. – 99. (cancelled)

100. (new) An article of manufacture configured for operation in a wireless multiple-access communication system, comprising:

a controller for determining a current operating state of at least one terminal in a wireless communication system;

a transmitter for transmitting messages that is configured to transmit a first message on a first contention-based random access channel when the at least one terminal is in a first operating state and to transmit a second message on a second contention-based random access channel when the at least one terminal is in a second operating state.

101. (new) The article of manufacture of claim 1, wherein the controller is operative to determine the current operating state based upon whether or not the terminal has registered with the system.

102. (new) The article of manufacture of claim 1, wherein the controller is operative to determine the current operating state based upon whether or not the terminal can compensate for propagation delay to an access point receiving messages sent by the terminal.

103. (new) The article of manufacture of claim 1, wherein the controller is operative to determine the current operating state based upon whether or not the terminal achieves a required received signal-to-noise ratio (SNR).

104. (new) The article of manufacture of claim 1, wherein the transmitter is operative to process the messages to include an identifier for the terminal.

105. (new) The article of manufacture of claim 1, wherein the controller is configured to process received information corresponding to parameters conveying configuration information for at least the first and second contention-based random access channels.

106. (new) The article of manufacture of claim 1, wherein the transmitter is configured to process the messages for transmission on a set of subbands of a plurality of subbands of the first or second contention-based random access channel.

107. (new) The article of manufacture of claim 1, wherein the transmitter is operative to process the messages ranging from one OFDM symbol to a plurality of OFDM symbols.

108. (new) The article of manufacture of claim 1, further comprising:

a receiver to receive at least one broadcast message including information regarding configuration of at least two contention-based random access channels for a frame, said at least two contention-based random access channels include the first and second contention-based random access channels;

a selector to select one contention-based random access channel from among the at least two contention-based random access channels based on the current operating state; and

wherein the at least two contention-based random access channels comprise a first random access channel configured for use by registered terminals for system access and a second random access channel used by registered/unregistered terminals for system access.

109. (new) A method of accessing a wireless communication system, comprising:

determining whether a terminal is registered or unregistered with a wireless communication system;

if the terminal is registered, transmitting a first message on a first contention-based random access channel to access the system; and

if the terminal is unregistered, transmitting a second contention-based message with a different format than the first message on a second random access channel to access the system.

110. (new) The method of claim 109, wherein the first message is transmitted in a manner to account for propagation delay to an access point receiving the first message.

111. (new) The method of claim 109, further comprising receiving information corresponding to parameters conveying configuration information for the first contention-based random access channel.

112. (new) The method of claim 109, further comprising receiving an assignment responsive to the message from a base station.

113. (new) The method of claim 109, further comprising:

receiving at least one broadcast message including information regarding configuration of at least two contention-based random access channels for a frame, said at least two contention-based random access channels include the first and second contention-based random access channels;

selecting one contention-based random access channel from among the at least two contention-based random access channels based on the current operating state; and

wherein the at least two contention-based random access channels comprise a first random access channel configured for use by registered terminals for system access and a second random access channel used by registered/unregistered terminals for system access.

114. (new) The method of claim 109, wherein at least one of the first and second messages comprises a range of OFDM symbols from one to a plurality.